

What is claimed is:

- 5 1. A multifocal lens, comprising: a.) a distance vision power zone; b.) a near vision power zone comprising an add power; c.) an intermediate vision power zone between the distance and near vision power zones; and d.) a fourth zone located inferior to the near vision power zone, wherein the fourth zone has a constant power that is within about 20 to about 80 % of the add power.
- 10 2. The lens of claim 1, wherein the lens is a progressive addition lens.
3. The lens of claim 1, wherein the refractive power of the fourth zone is about 25 to about 75 % of the add power.
- 15 4. The lens of claim 1, wherein the fourth zone is blended continuously with the near zone.
5. The lens of claim 1, wherein a width of the fourth zone is about 5 to
20 about 25 mm.
6. The lens of claim 5, wherein a length of the fourth zone is about 10 to about 20 mm.
- 25 7. The zones of claim 1, wherein each of the distance, intermediate, near and fourth zone are located on one surface of the lens.
8. The lens of claim 7, wherein the zones are located on the front
surface of the lens.

9. The lens of claim 8, further comprising a back surface comprising one or more of a second distance vision power zone, a second near vision power zone, a second intermediate power zone, and a second fourth zone.

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10. The lens of claim 9, wherein the front and the back surfaces are misaligned.

11. The lens of claim 1, further comprising a cylinder power.

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12. The lens of claim 7, further comprising a cylinder power.

13. The lens of claim 8, further comprising a cylinder power.

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14. The lens of claim 9, further comprising a cylinder power.

15. The lens of claim 10, further comprising a cylinder power.

16. A method for designing a lens, comprising the step of providing a lens comprising: a.) a distance vision power zone; b.) a near vision power zone comprising an add power; c.) an intermediate vision power zone between the distance and near vision power zones; and d.) a fourth zone located inferior to the near vision power zone, wherein the fourth zone has a constant power that is within about 20 to about 80 % of the add power.

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17. The method of claim 16, wherein the fourth zone is a surface $Z'_s(x, y)$ that is produced according to the equation:

$$Z'_s(x, y) = Z_s(x, y) + T*y + O$$

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wherein $Z_s(x, y)$ is the fourth zone surface;

T is a tilt in an angle of the fourth zone surface in a direction y ; and
offset by an amount O is an amount of offset in a direction z .

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18. The method of claim 16, further comprising combining the surface $Z'_s(x, y)$ with a progressive surface $Z_p(x, y)$ to produce a surface $Z(x, y)$ according to the equation:

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$$Z(x, y) = F(x, y) * Z_p(x, y) + \{1 - F(x, y)\} * Z'_s(x, y)$$

wherein $0 \leq F(x, y) \leq 1$; and

$F(x, y)$ is a blending function.

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19. The method of claim 18, further comprising combining surface $Z(x, y)$ with a complementary spherical surface.

20. The method of claim 18, further comprising combining surface $Z(x, y)$ with a complementary toric surface.